Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the present application:

1. (currently amended) A method for the production of a porous ceramic body comprising the following steps:

selecting a first ceramic powder with a first grain size class, wherein the first ceramic powder substantially comprises α-SiC grains aside from unavoidable contaminants;

selecting a second ceramic powder with a second grain size class that is substantially smaller than the first grain size class, wherein the second ceramic powder substantially comprises α-SiC grains aside from unavoidable contaminants;

mixing of the first and second ceramic powders to produce a powder with a bimodal grain size distribution;

shaping of a molded body from the powder mixture;~~and~~

heating and conditioning of the molded body at a temperature from 1750 to 1950 degrees Celsius and for a period of time such that, through recrystallization of the molded body, the grains with the second grain size are dissolved and, through attachment of the material of the second ceramic grains to the first ceramic grains, these are firmly linked to each other~~.~~; and

layer-wide repeating of said selecting first and second ceramic powders, said mixing of the first and second ceramic powders, said shaping of a molded body, and said heating and conditioning of the molded body with ever decreasing mean grain sizes such that a gradient with regard to the mean grain size is created transverse to the layers in the ceramic body.

2. (previously presented) The method of claim 1, wherein at least one chosen from the grains of the first ceramic powder and the second ceramic powder have at least one chosen from a defined maximum grain size and a defined minimum grain size.

3. (previously presented) The method of claim 1, wherein mixing of the first and second ceramic powders comprises the ceramic powders being present in a slurry, and wherein said shaping of a molded body is effected by casting.

4. (previously presented) The method of claim 1, including drying the molded body prior to said heating and conditioning.

5. (previously presented) The method of claim 1, wherein the mixing ratio between the first and second ceramic powder lies in the range of approximately 6:1 to 1:1.

6. (previously presented) The method of claim 1, wherein the size ratio between the mean grain size of the smallest grains of the first ceramic powder and the mean grain size of the largest grains of the second ceramic powder lies in the range of approximately 6:1 to 2:1.

7. (previously presented) The method of claim 1,wherein batches of narrow grain size distribution are used for the first and second ceramic grains.

8. (previously presented) The method of claim 1, wherein grain bands or grain mixtures having defined upper and lower grain size are used for the first ceramic grains and grain bands or grain mixtures having a defined upper grain limit are used for the second ceramic grains, with the size ratio between the finest grain fraction of the first ceramic grains and the largest grain fraction of the second ceramic grains chosen to be at least 2:1.

9. (previously presented) The method of claim 1, wherein shaping of the molded body proceeds on a substrate.

10. (previously presented) The method of claim 1, wherein the ceramic grains are of non-oxide ceramic.

11. (previously presented) The method of claim 1, wherein for a first layer the grain sizes of the first ceramic powder are in the range of 6.5 µm (FEPA 800) to 23 µm (FEPA 360), wherein for a second layer the grain sizes of the first ceramic powder are in the range of 1.5 µm (JIS 7000) to 6.5 µm (FEPA F800), and wherein for a third layer the grain sizes of the first ceramic powder are in the range of 0.5 µm (JIS 10000) to 2 µm (JIS 6000), and wherein the second ceramic powder for the first, second, and third layers is at least one chosen from JIS 6000 for the first layer, JIS 9000 for the second layer, JIS 20000 for the third layer and equivalent grain bands for each of the first, second, and third layers.

12. (previously presented) The method of claim 1, wherein heating and conditioning comprises selecting the temperature and firing duration such that generally all grains of the second ceramic powder are no longer present in the microstructure of the finished ceramic body and such that the grain size remains as close as possible in the region of the initial grain size of the first ceramic powder to thereby generally prohibit giant grain growth.

13. (previously presented) The method of claim 1, wherein grain sizes in the range of 0.9 µm to 17 µm are used for the first ceramic powder and grain sizes in the range of 0.2 µm to 3 µm are used for the second ceramic powder.

14. (previously presented) A porous ceramic body, said ceramic body made by

selecting a first ceramic powder with a first grain size class, wherein the first ceramic powder substantially comprises α-SiC grains aside from unavoidable contaminants;

selecting a second ceramic powder with a second grain size class that is substantially smaller than the first grain size class, wherein the second ceramic powder substantially comprises

α-SiC grains aside from unavoidable contaminants;

mixing of the first and second ceramic powders to produce a powder with a bimodal grain size distribution;

shaping of a molded body from the powder mixture; and

heating and conditioning of the molded body at a temperature from 1750 to 1950 degrees Celsius and for a period of time such that, through recrystallization of the molded body, the grains with the second grain size are dissolved and, through attachment of the material of the second ceramic grains to the first ceramic grains, these are firmly linked to each other;

said ceramic body comprising a substantially homogeneous structure of interconnected open pores and ceramic grains, with said ceramic grains having a substantially rounded shape, and with both said ceramic grains and said open pores lying substantially in defined ranges in at least one chosen from a narrow grain size range and a narrow pore size range, wherein the defined ranges of said narrow grain size range or said narrow pore size range distribution are present as in a form of at least one layer on a coarse-porous support, and said ceramic body substantially comprises recrystallized RSiC aside from unavoidable contaminants.

15. (previously presented) The ceramic body of claim 14, wherein said ceramic grains are present in substantially completely crystalline form.

16. (previously presented) The ceramic body of claim 14, wherein said ceramic body is substantially free of melt phase.

17. (previously presented) The ceramic body of claim 14, wherein said ceramic grains are of non-oxide ceramic and substantially of the same type.

18. (previously presented) The ceramic body of claim 14, wherein said ceramic body has adequate strength for use as a filter membrane.

19. (previously presented) A cross-flow membrane filter, said filter comprising a ceramic body on a SiC coarse-porous support, said ceramic body including at least one layer, said at least one layer including;

a first ceramic powder, said first ceramic powder substantially comprising SiC and having a first grain size, and

a second ceramic powder, said second ceramic powder substantially comprising SiC and having a second grain size, said second grain size being substantially smaller than said first grain size,

said ceramic body made by;

selecting the first ceramic powder with the first grain size class, wherein the first ceramic powder substantially comprises α-SiC grains aside from unavoidable contaminants;

selecting the second ceramic powder with the second grain size class that is substantially smaller than the first grain size class, wherein the second ceramic powder substantially comprises α-SiC grains aside from unavoidable contaminants;

mixing of the first and second ceramic powders to produce a powder with a bimodal grain size distribution;

shaping of a molded body from the powder mixture; and

heating and conditioning of the molded body at a temperature from 1750 to 1950 degrees Celsius and for a period of time such that, through recrystallization of the molded body, the grains with the second grain size are dissolved and, through attachment of the material of the second ceramic grains to the first ceramic grains, these are firmly linked to each other;

wherein via recrystallization said second ceramic powder is dissolved and attached to said first ceramic powder such that said second ceramic powder is firmly linked to said first ceramic powder, and wherein said ceramic body comprises a substantially homogenous structure of interconnected open pores and ceramic grains with said ceramic grains having a substantially rounded shape, and wherein said ceramic grains and said open pores lie substantially in defined ranges in at least one chosen from a narrow grain size range and a narrow pore size range.

20. (previously presented) The filter of claim 19, said filter exhibiting at 1 bar TMP in the test on water a flow greater than 5 m^3 per m^2 per bar per hour when said ceramic body includes two layers, and greater than 3 m^3 per m^2 per bar per hour when said ceramic body includes three layers.

21. (previously presented) The filter of claim 19, wherein said filter further comprises a layer of porous oxide ceramic adapted for nanofiltration.

22. (cancelled)

23. (previously presented) The method of claim 5, wherein the mixing ratio between the first and second ceramic powder lies in the range of approximately 4:1 to 2:1.

24. (previously presented) The method of claim 6, wherein the size ratio between the mean grain size of the smallest grains of the first ceramic powder and the mean grain size of the largest grains of the second ceramic powder is approximately 3:1.

25. (previously presented) The method of claim 9, wherein the substrate comprises a porous ceramic body of the same material, and wherein shaping of the molded body proceeds in pore channels of the substrate.

26. (previously presented) The ceramic body of claim 14, wherein said layers on said coarse-porous support are present in pore channels of said coarse-porous support.

27. (previously presented) The ceramic body of claim 18, wherein said ceramic body has adequate strength for use as a cross-flow membrane filter.

28. (previously presented) The filter of claim 20, wherein said filter exhibits a flow of approximately 8 m^3 per m^2 per bar per hour when said ceramic body includes two layers, and wherein said filter exhibits a flow of approximately 6 m^3 per m^2 per bar per hour when said ceramic body includes three layers.